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10/016,472	12/10/2001	Anthony J. Grzesiak	DKT 00065A (BWI-00056)	4573

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EXAMINER

BURCH, MELODY M

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/016,472

Applicant(s)

GRZESIAK ET AL.

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,11-15 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11-15 and 18-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 May 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - In line 17 of pg. 7 it appears that the phrase "72 in the large piston" should be changed to --78 in the large piston--.

Appropriate correction is required.

Claim Objections

2. Claims 18-23 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 18 and 23 depend on a cancelled claim. Claims 19-22 are objected to due to their dependency on claim 18.

3. Claims 1 and 4-9, 11, and 12 are objected to because of the following informalities: in lines 1 and 9 Examiner recommends using the phrase --the speed of rotation of said brake drum-- to avoid the use of the phrase "brake drum's" first claimed in line 4 from the bottom of claim 1 (also in claim 9). The remaining claims are objected to due to their dependency from one of claims 1 and 9. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 19. Claim 19 recites the limitation "said applied position" in line 2.

There is insufficient antecedent basis for the limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5752588 to Reichert et al.

Re: claims 1 and 7. Reichert et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum disclosed in col. 3 line 6, the mechanism comprising: a brake band 14 encircling the brake drum, the brake band including opposing ends the brake band operable to be compressed and expanded around the brake drum, a hydraulic servo shown within element 1, and a linkage 10,11,12 coupled to the servo and the brake band, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation.

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Reichert et al. show the limitation of the hydraulic servo being a two-stage servo including a first piston 9 and a second piston 3, the first piston being smaller than the second piston, the first piston being operable to provide rapid movement of the brake band and the second piston being operable to provide fine adjustments of the brake band.

Re: claim 8. Reichert et al. show the limitation of the mechanism further including a clip structure shown in the area of element number 13, the clip structure being mounted to an end of the brake band and being coupled to the linkage via the abutment with element 12 of the linkage.

8. Claim 1, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by JP-11264460 (using US Patent 6102825 to Hisano et al. as an English equivalent).

Re: claims 1 and 7. Hisano et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum 31, the mechanism comprising: a brake band 32 encircling the brake drum, the brake band including opposing ends the brake band operable to be compressed and expanded around the brake drum, a hydraulic servo 4, and a linkage 42,34 coupled to the servo and the brake band, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation.

Hisano et al. show the limitation of the hydraulic servo being a two-stage servo including a first piston 43 and a second piston 44, the first piston being smaller than the second piston, the first piston being operable to provide rapid movement of the brake

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band and the second piston being operable to provide fine adjustments of the brake band.

Re: claim 8. Hisano et al. show the limitation of the mechanism further including a clip structure 33,35, the clip structure being mounted to an end of the brake band and being coupled to the linkage.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 5, 9-11, 13, 18-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 5003842 to Hatta et al. Reichert et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum disclosed in col. 3 line 6, the mechanism comprising: a brake band 14 encircling the brake drum, the brake band including opposing ends, the brake band operable to be compressed and expanded around the brake drum, a two-stage hydraulic servo, the two stage servo providing a rapid activation of the linkage during a first stage to rapidly expand the brake band using first piston 9, and a controlled compression and expansion of the brake band during a second stage using second piston 3, and a linkage 11,12 coupled to the servo and the brake band, and a clip structure shown in the area of element 13, the clip structure being mounted to an end of the brake band and being coupled to the linkage by way of the abutment with element

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12 of linkage 11,12, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation, but does not include the limitation of a servo rod position sensor for determining the position of a stroke rod of the servo. Hatta et al. teach in figure 5 and in col. 10 lines 29-30 the use of a stroke rod position detecting means in a brake band mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the servo of Reichert et al. to have included a servo rod position sensor, as taught by Hatta et al., in order to provide a means of detecting the position of the rod of the servo to help determine band compression or expansion.

11. Claims 4, 5, and 13-15, 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11264460 to Hisano et al. in view of US Patent 5003842 to Hatta et al.

Re: claims 4, 5, 13, 18, 19, 21, and 23. Hisano et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum 31, the mechanism comprising: a brake band 32 encircling the brake drum, the brake band including opposing ends, the brake band operable to be compressed and expanded around the brake drum, a two-stage hydraulic servo, the two stage servo providing a rapid activation of the linkage during a first stage to rapidly expand the brake band using first piston 43, and a controlled compression and expansion of the brake band during a second stage using second piston 44, and a linkage 34,42 coupled to the servo and the brake band, and a clip structure 33,35, the clip structure being mounted to an end of the

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brake band and being coupled to the linkage, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation, but does not include the limitation of a servo rod position sensor for determining the position of a stroke rod of the servo. Hatta et al. teach in figure 5 and in col. 10 lines 29-30 the use of a stroke rod position detecting means in a brake band mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the servo of Hisano et al. to have included a servo rod position sensor, as taught by Hatta et al., in order to provide a means of detecting the position of the rod of the servo to help determine band compression or expansion.

Re: claims 14 and 20. Hisano et al. disclose in col. 7 lines 22-30 the limitation of shift parameters being based on band strain, seat acceleration, shaft torque or a combination of these or particularly shaft torque (from the turbine rotation speed sensor).

Re: claims 15 and 22. Hisano et al. show in figure 1 the use of shift control accomplished by way of control of an apply solenoid 55.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 4070981 to Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Reichert et al. to have included a strain sensor, as taught by

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Guinn et al., in order to provide a means of detecting the compression and expansion of the band brake device.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11264460 in view of US Patent 4070981 to Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Hisano et al. to have included a strain sensor, as taught by Guinn et al., in order to provide a means of detecting the compression and expansion of the band brake device.

14. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 5003842 to Hatta et al. as applied to claim 9 above, and further in view of Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Reichert et al. to have included a strain sensor, as taught by Guinn et al., as modified, in order to provide a means of detecting the compression and expansion of the band brake device.

Response to Arguments

15. Applicant's arguments with respect to claims have been considered but are not persuasive.

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Applicant argues that the Reichert et al. reference fails to show or suggest the servo providing a rapid activation of the linkage during a first stage and a controlled compression and expansion of the brake band during a second stage.

Examiner notes that Applicant's invention includes a servo providing a rapid activation during a first stage using a small apply piston 62 that is arranged closest to the linkage and that promotes the initial brake application movement of the linkage. The servo of Applicant's invention also provides a larger apply piston 64 for more finite adjustments of the band pressure during a second stage as described on pg. 7 of Applicant's specification.

In comparison, Examiner notes that Reichert et al. show a small apply piston 9 that is arranged closest to the linkage and that promotes the initial brake application movement of the linkage. Reichert et al. also show a larger apply piston 3 for more finite adjustments of the band pressure during a second stage. It is evident that Reichert et al. describe the invention to the same extent as Applicant.

Applicant points out that Reichert et al. disclose that its servo operates such that it "minimize[s] the volume of hydraulic fluid required to apply a friction brake". Applicant concludes that the statement suggests that the first stage actuation is accomplished slowly instead of rapidly. Examiner disagrees. Contrary to Applicant's suggestion, Examiner concludes that the use of a minimized amount of hydraulic fluid to achieve actuation suggests that actuation occurs faster since it takes less time to wait for the accumulation of a small or minimized volume of fluid. Examiner also maintains that since the smaller apply piston associated with the first stage is the first to cause brake

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actuation, the first stage may be considered the quicker (or comparatively rapid) stage just as the first runner to reach a finish line of a race is considered to be the quicker runner.

Similarly, since the Hisano et al. reference shows a small apply piston 43 arranged closest to the linkage that promotes the initial brake application movement to the linkage and shows a larger apply piston 44 for more finite adjustments of the brake band pressure to the same extent as Applicant's, Examiner maintains the rejections.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 7/16/03
mmb
July 16, 2003

M. C. Graham
8/13/2003
MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310